

(19) Europäisches Patentamt

European Patent Office

Office européen des brevets



(11) EP 0 839 978 A1

(12)

## EUROPEAN PATENT APPLICATION

(43) Date of publication:

06.05.1998 Bulletin 1998/19

(51) Int. Cl.<sup>6</sup>: E05B 73/00, G06F 1/00

(21) Application number: 97203294.0

(22) Date of filing: 24.10.1997

(84) Designated Contracting States:

AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC  
NL PT SE

(30) Priority: 01.11.1996 SE 9604018

(71) Applicant: Warmbold, Michael  
331 33 Värnamo (SE)

(72) Inventor: Warmbold, Michael  
331 33 Värnamo (SE)

(74) Representative:  
Wallengren, Yngvar  
Patentbyran Y Wallengren AB  
Box 116  
331 21 Värnamo (SE)

### (54) A theft-prevention device

(57) The disclosure relates to a device for preventing, or at least impeding the theft of computers (3) or parts thereof, comprising an adapter and a bracket (2). The adapter is securable on the casing (4) of the computer (3), preferably its underside. The bracket (2) is securable in an object such as a floor, a wall or an item of furniture. The adapter and the bracket have mutually interconnectable engagement means (19). The bracket (2) has side walls (5) which are disposed to follow the walls (6) of the casing (4) which connect to opposing edges of the anchorage surface of the computer. The side walls (5) of the bracket (2) have, at their one end, arrest portions (11) angled towards one another and which, in an adapter disposed in the bracket with casing, are disposed to prevent access to at least certain parts of adjacent corner edge regions of the casing.

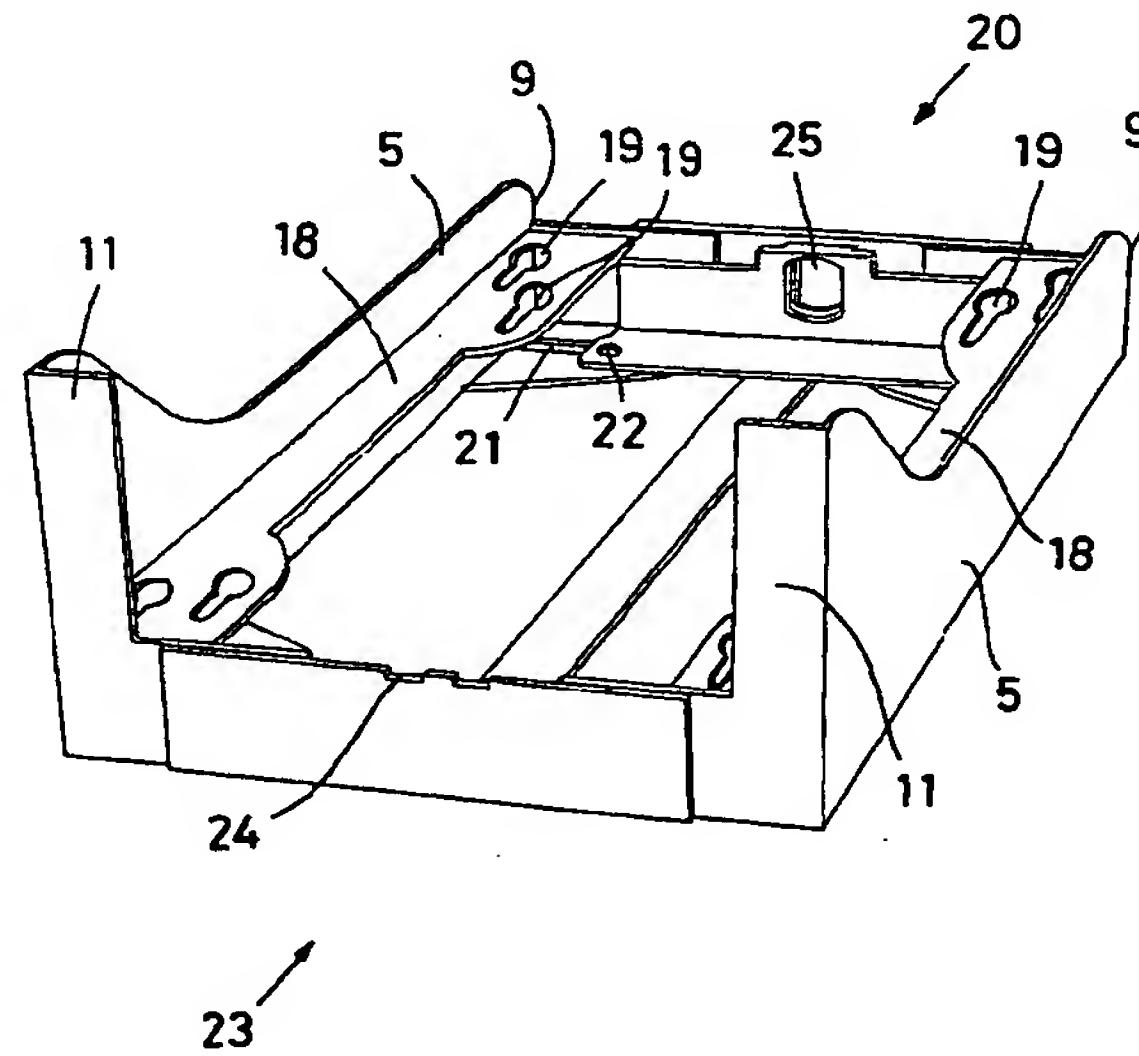


Fig. 3

**Description****TECHNICAL FIELD**

The present invention relates to a device for preventing, or at least impeding the theft of a computer or parts thereof, and comprises an adapter which is securable to an anchorage surface on the casing of the computer, preferably its underside, a bracket which is securable in an object such as a floor, a wall, an item of furniture etc., the adapter and the bracket having mutually interconnectible engagement means.

**BACKGROUND ART**

The theft of complete computers or components thereof has become increasingly common. Primarily, it is processors and memory units inside the computers that are particularly targeted. Various aids have previously been employed to prevent a complete computer from being carried off without consent. Examples of such devices may be wires, cables, chains or the like that are threaded through an aperture in the casing of the computer and are then locked in position to some suitably fixed anchorage fitting.

As a rule, in this type of locking system, there is nothing to prevent the casing of the computer proper being opened and vital components from being removed. Thus, in practice it has proved that an experienced computer thief needs but one or two minutes to open a computer casing and strip it of such targeted components.

As regards similar types of equipment, for example car radios, various models of so-called support cassettes have been employed in which the radio apparatus itself may be secured but may also be easily removed. However, this technology is not directly applicable to the computer sector, since computer hardware may be of considerable dimensions and since at least a simple model of a "support cassette" affords no protection against dismantling of the locked computer.

**PROBLEM STRUCTURE**

The present invention has for its object to realise a device which obviates the drawbacks inherent in prior art methods and apparatuses. In particular, the present invention has for its object to design the device intimated by way of introduction such that, on the one hand, it permits reliable locking of the computer proper and, on the other hand, it prevents the casing of the computer from being opened when the computer is locked in the bracket. The present invention further has for its object to realise a device which is as good as universally applicable and, therefore, not dependant upon the outer dimensions of the computer casing. The present invention yet further has for its object to realise a device which may be manufactured at low cost and

which is both reliable and simple to use.

**SOLUTION**

5 The objects forming the basis of the present invention will be attained if the device intimated by way of introduction is characterized in that the bracket has side walls which are disposed to follow the walls of the casing which connect to opposing edges of the anchorage surface, that the side walls have, at their one end, arrest portions which are angled towards one another and which, in an adapter disposed in the bracket with a casing, are disposed to prevent access to at least certain parts of adjacent corner edge regions of the casing.

10 15 Further advantages will be attained according to the present invention if the device according to the invention is also given one or more of the characterizing features as set forth in appended subclaims 2 to 10.

20 **BRIEF DESCRIPTION OF THE ACCOMPANYING DRAWINGS**

25 The present invention will now be described in greater detail hereinbelow, with particular reference to the accompanying Drawings. In the accompanying Drawings:

30 Fig. 1 is a perspective view of a part of a computer table with the device according to the present invention mounted thereon, and a computer fixedly locked in the device;

35 Fig. 2 is a partial view in perspective of the computer with an adapter, seen from beneath;

35 Fig. 3 is a perspective view of a bracket included in the device according to the invention; and

40 Fig. 4 is a perspective view of the bracket of Fig. 3, seen from the opposite direction.

**DESCRIPTION OF PREFERRED EMBODIMENT**

45 50 In Fig. 1, reference numeral 1 relates to an object such as an item of furniture, for example a table, reference numeral 2 relates to a bracket in which a computer 3 with a casing 4 is fixedly locked. The bracket 2 is fixed in the object 1 in such a manner that the fixing anchorage cannot be tampered with or opened when the computer 3 is in position fixedly locked in the bracket.

55 The object 1 is exemplified as a table, but may also be a floor, a wall or other item of furniture or interior decoration. Further, the bracket 2 may naturally be placed on the underside of the table top such that the computer 3 is thereby suspended from the underside of the table top. The orientation of the device according to the present invention is only restricted by considerations of convenience and reference to possible requirements on

the direction the computer faces when in operation.

It will further be apparent from Fig. 1 that the bracket 2 includes opposing side walls 5 which follow the opposing side walls 6 of the casing 4 of the computer.

It will yet further be apparent from the Drawing that the side walls 5 of the bracket 2 are of lower height or less width at the front 7 of the computer 3 than is the case at the rear wall 8 of the computer. Hereby, the side walls 5 may be considered as approximately L-shaped, their front end edges 9 being free. Preferably, the length of the side walls 5 of the bracket is equal to or less than the depth of the casing 4 of the computer. As a result of this design, the casing 4 of the computer may be slid in between the opposing side walk 5 in a direction intimated by the broken line 10.

At their rear or inner ends, the side walls 5 have arrest surfaces 11 which are only intimated in Fig. 1 and which cover at least certain parts of corner edge regions between the opposing side walls 6 of the computer casing 4 and its rear wall 8. In that the side walls 5 and the arrest surfaces 11, respectively, extend in this manner up along the rear vertical corner edge regions of the computer, screws placed in this region and employed for uniting the computer casing will be inaccessible when the computer is mounted in the bracket.

Fig. 2 schematically shows a portion of the casing 4 of the computer seen from beneath in perspective, reference numeral 12 particularly relating to the bottom surface of the casing 4. Furthermore, the opposing side walls 6 and the rear wall 8 of the casing 4 will be apparent from the Drawing.

The Drawing figure further shows an adapter comprising two mirror-reversed adapter portions 13 with engagement means 14 (only one of the engagement means is shown on the one adapter portion, but such means are provided on both). The adapter portions 13 are elongate and are placed with their longitudinal edges along the lower corner edge lines 15 of the casing 4. In addition, they are displaced rearwards and with their rear ends placed flush with the lower edge line 16 of the rear wall 8.

The adapter portions 13 are fixedly screwed in the bottom surface 12 of the casing 4 by the intermediary of screws 17 which may have a plurality of different alternative placings. For example, the screws 17 may be common for securing the engagement means 14 on the adapter portions 13 and for securing the adapter portion to the casing 4 proper. Naturally, the screws may be placed elsewhere, in which event such placing may be rendered necessary because of the lack of available interior space in the casing 4.

Fig. 3 shows in perspective the bracket 2 of the device according to the invention seen from that end which is intended to be located at the rear wall 8 of the computer. This Drawing figure clearly shows the mutual arrangement of the side walls 5 and the arrest surfaces 11. It will be further apparent from the Drawing figure

that, in connection with the side walls 5, there are longitudinal support surfaces 18 on which the adapter or the casing 4 of the computer rests in a position of use according to Fig. 1. The support surfaces 18 are provided with engagement means 19 which may be interconnected with the engagement means 14 by a relative displacement between the adapter and the bracket in the direction intimated by the broken line 10 in Fig. 1. In that the engagement means 19 are designed as key-hole-shaped apertures in the support surfaces 18 and the engagement means 14 on the adapter are designed as mushroom-shaped projections, it will readily be perceived that the projections may be passed through the keyhole-shaped apertures and then be displaced a short distance parallel with the longitudinal direction of the support surfaces 18 to the locking position.

Since the dimensions of a computer casing 4 may vary both as regards the length and the width of the bottom surface 12, the shorter end wall 20 of the bracket illustrated in Fig. 3 is designed in such a manner that it does not extend up over a plane which is common to both of the support surfaces 18. In addition, the side walls 5 have no counterpart to the arrest surfaces 11, such that the end edges 9 of the side walls are free. As a result, and as intimated in Fig. 1, the front portion of the computer casing 4 may extend past the end edges 9 of the side walls 6 so that the front 7 of the computer will be located a distance outside the end wall 20.

In order to permit adaptation of the device according to the present invention to different widths of computer casings 4, the bracket includes two opposing side pieces with the side surfaces 5, the support surfaces 18 and the arrest surfaces 11. Further, the bracket includes a central portion which is securable in the object 1 and in relation to which both of the side pieces are movable towards and away from one another and fixedly lockable in relation to the central portion. To achieve this feature, the side pieces have elongate apertures 21 which are in register with apertures 22 in the central portion. By passing a screw through the apertures 21 and 22 - and preferably also through, for example, the table top according to Fig. 1 - the side pieces may be positionally fixed in relation to the central portion, at the same time as the entire bracket 2 is secured on the object 1. If, in such instance, use is made of so-called carriage bolts, these will have their bulged heads without engagement devices located on the underside of the table top 1 in Fig. 1, while their locking nuts will be located at the apertures 22. When the casing 4 is mounted in place, these nuts will be completely inaccessible.

The bracket 2 has anchorages 24 in the rear end wall 23, for catching on a yoke or stirrup (not shown on the Drawings) through which the wiring of the computer 3 is passed. The stirrup is dimensioned in such a manner that the terminals mounted on the wiring cannot pass through. Further, the stirrup is located in the anchorages 24 designed as recesses in such a manner that the stirrup extends on the inside of the bracket

where it abuts against the underside 12 of the computer casing 4 so that this is thereby prevented from being lifted out or pulled out of the recesses.

For fixedly locking the computer 4 in the bracket 2, the embodiment shown on the Drawings, has, in the front end wall 20, an anchorage device 25 for a key lock. The lock is designed in such a manner that, in the locked state, it engages with the bottom 12 of the computer casing or a striker plate or the like fixed thereon so that displacement of the computer casing in the direction of the broken line 10 in Fig. 1 is prevented.

As an alternative to the anchorage device 25, it is possible to provide, in the side surfaces 5, anchorage devices for one or more locks which are placed such that, in the locked state, they engage with the engagement means 14 and prevent their displacement in the engagement means 19 in the support surfaces 18.

Both side walls 5 may possibly be provided with anchorage devices for a key lock, whereby the need for manufacturing both left-hand and right-hand variations of the device according to the present invention will be avoided.

The present invention may be modified without departing from the scope of the appended Claims.

## Claims

1. A device for preventing, or at least impeding the theft of a computer (3) or parts thereof, comprising: an adapter which is securable to an anchorage surface (12) on the casing (4) of the computer (3), preferably its underside, a bracket (2) which is securable in an object (1) such as a floor, a wall, an item of furniture etc., the adapter and the bracket (2) having mutually interconnectible engagement means (14, 19, respectively), characterized in that the bracket (2) has side walls (5) which are disposed to follow the walls (6) of the casing (4) which connect to opposing edges (15) on the anchorage surface (12); and that the side walls (5) of the bracket (2) have, at their ends, arrest portions (11) which are angled towards one another and which, at an adapter disposed in the bracket with a casing (4), are disposed to prevent access to at least certain parts of adjacent corner edge regions of the casing.
2. The device as claimed in Claim 1, characterized in that the arrest portions (11) and adjacent portions of the side walls (5) of the bracket (2) are of considerably greater height or width than the rest of the major portion of the side walls (5).
3. The device as claimed in Claim 1 or 2, characterized in that the side walls (5) of the bracket (2) at their ends facing away from the arrest surfaces (11) have their end edges (9) free, whereby the casing (4) is insertable between the side walls (5) substan-

tially parallel with their longitudinal direction (10).

4. The device as claimed in any of Claims 1 to 3, characterized in that said engagement means (14, 19) are movable into engagement with one another by sliding of the casing in between the side walls (5) of the bracket (2) in their longitudinal direction (10).
5. The device as claimed in any of Claims 1 to 4, characterized in that the side walls (5) of the bracket (2) extend substantially along the entire length or depth of the bracket (2); and that this length is preferably less than the geometric extent of the casing (4) in the same direction.
6. The device as claimed in any of Claims 1 to 5, characterized in that the bracket (2) includes two opposing side pieces with the side surfaces (5), the support surfaces (18) and the engagement means (19), and also a central portion for uniting the side pieces.
7. The device as claimed in any of Claims 1 to 6, characterized in that the distance between the side walls (5) of the bracket (2) is adjustable.
8. The device as claimed in any of Claims 1 to 7, characterized in that the adapter includes two adapter portions (13) which are mirror-reversed in relation to one another and which each are disposed along opposing edges (15) of the underside (12) of the casing (4) and are provided with engagement means (14).
9. The device as claimed in any of Claims 1 to 8, characterized in that the side pieces and the central portion are interconnectible in mutually optional positions by means of screws, which also serve for anchoring the bracket (2) on the object (1).
10. The device as claimed in any of the preceding Claims, characterized in that the bracket (2) has a stirrup or hood through which the wiring of the computer (3) may be passed, the stirrup or hood being fixed in the bracket with the computer (3) mounted therein.

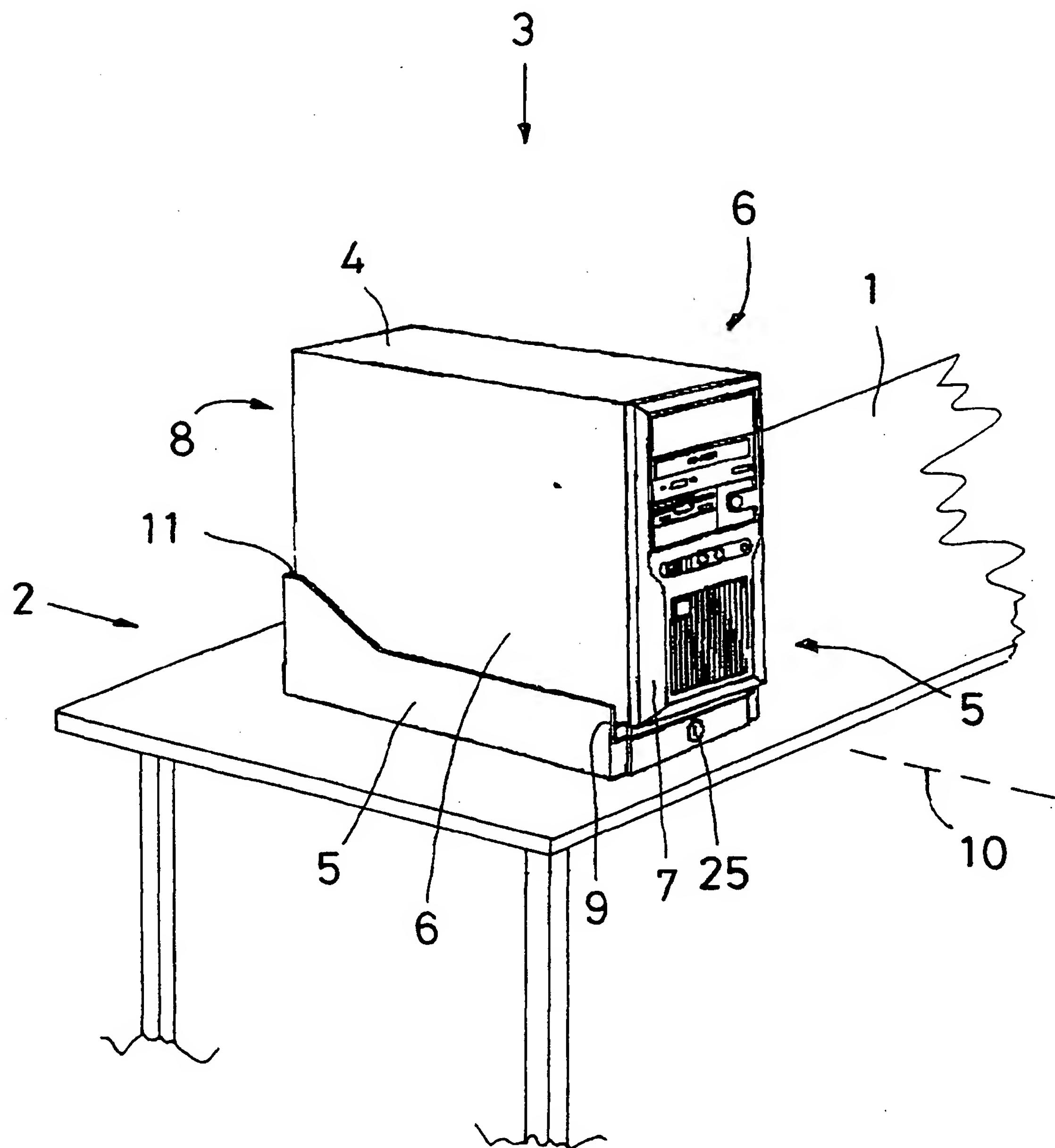


Fig 1

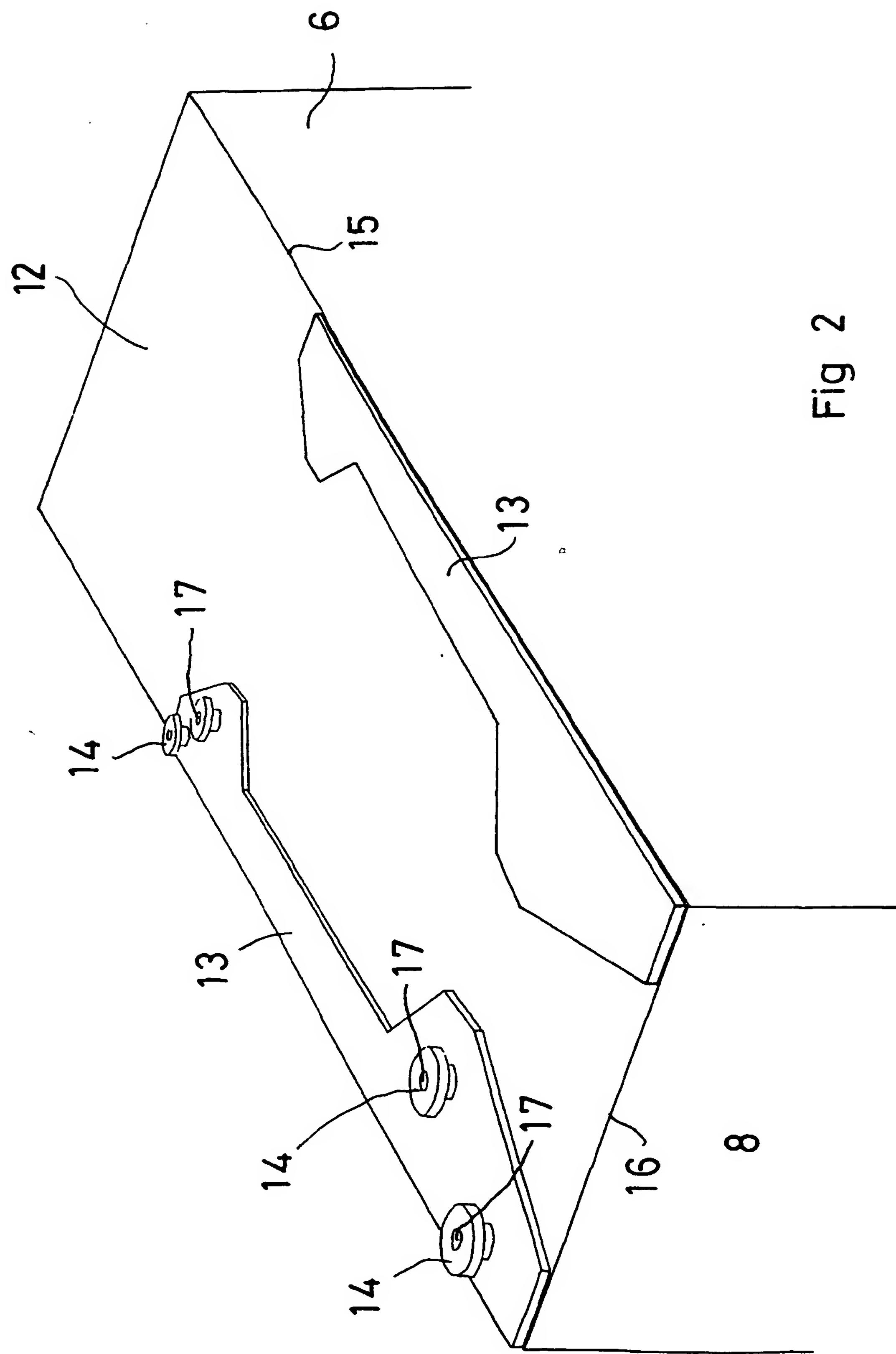


Fig 2

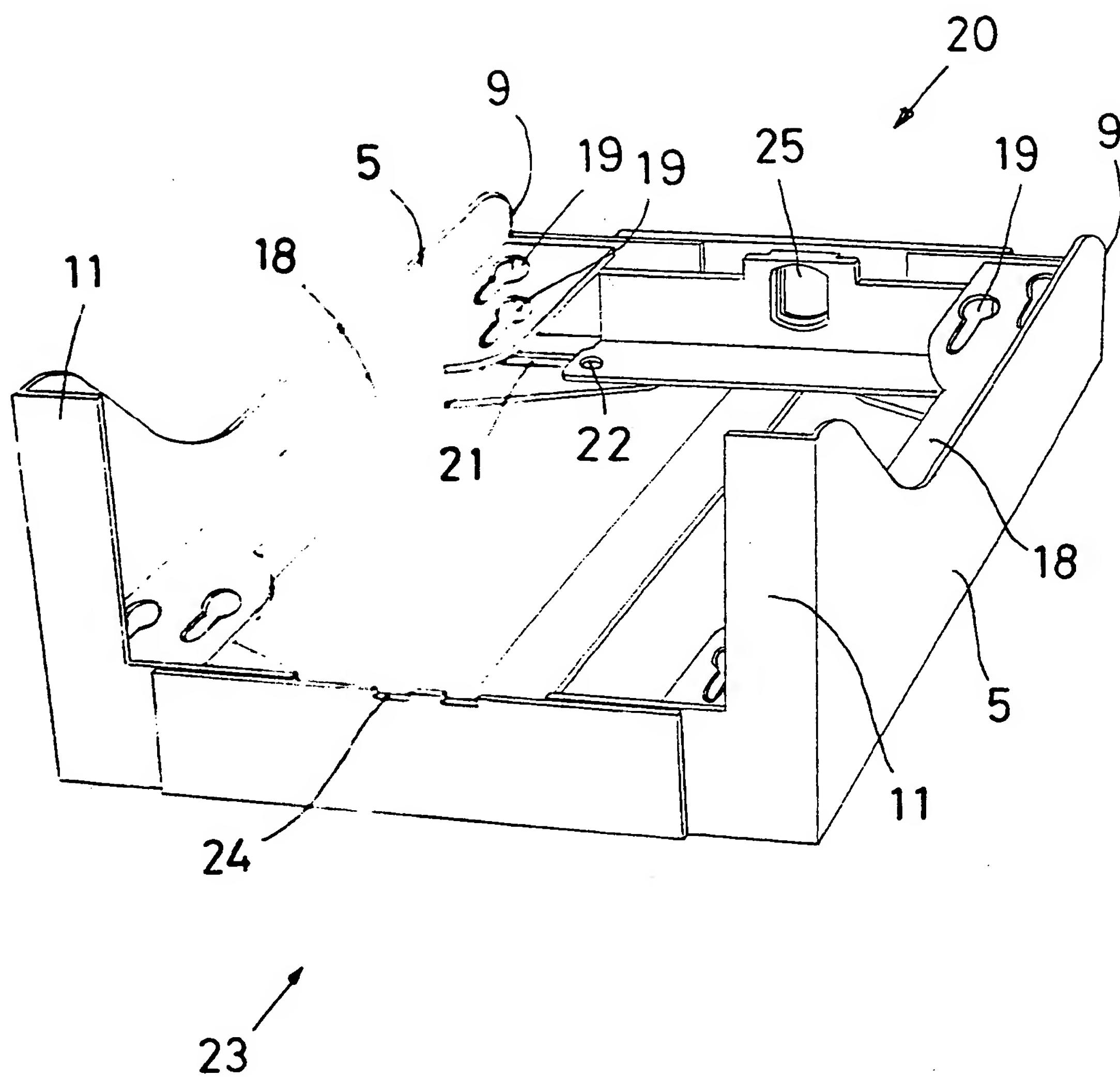


Fig 3

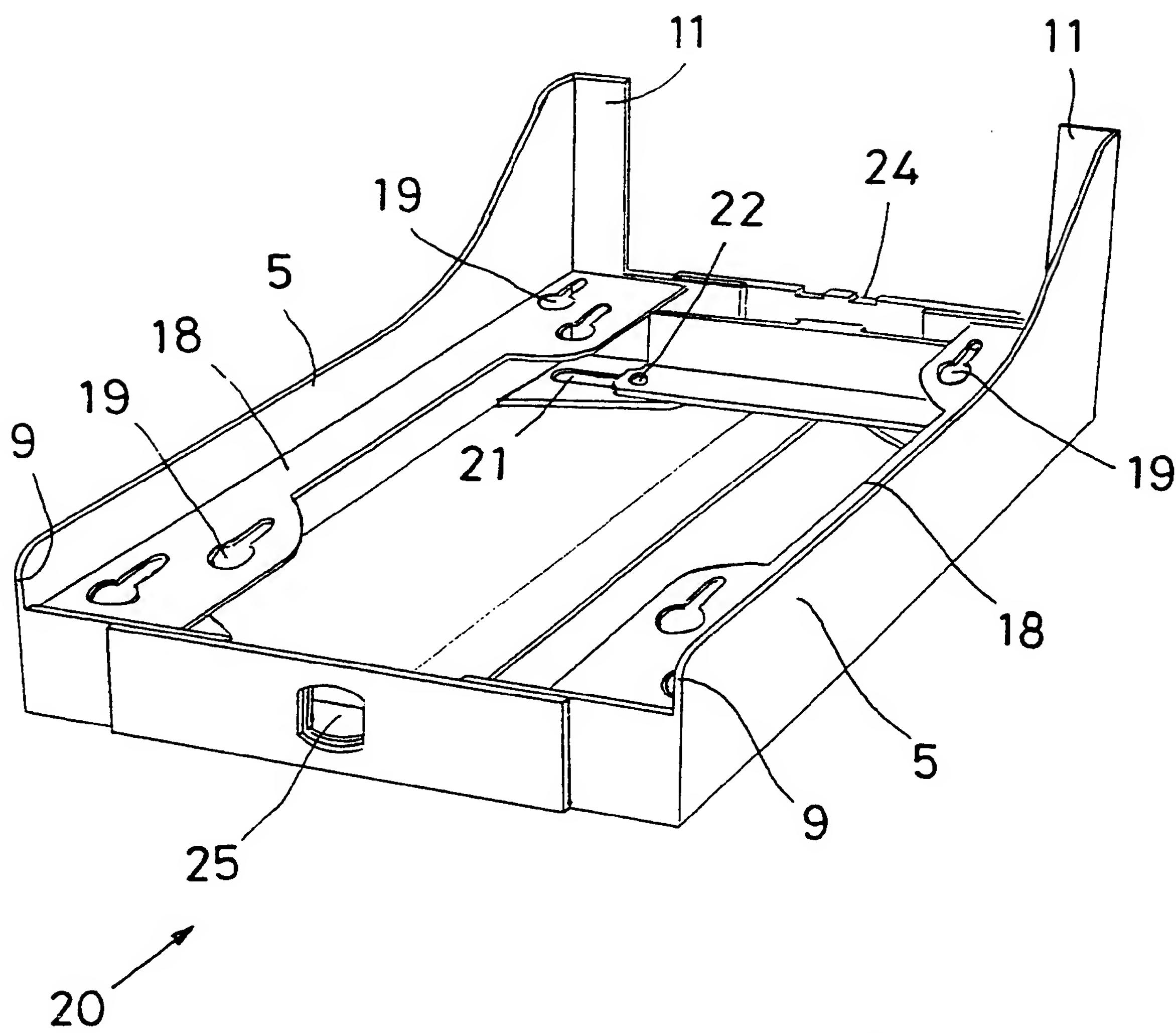


Fig 4



European Patent  
Office

## EUROPEAN SEARCH REPORT

Application Number  
EP 97 20 3294.0

DOCUMENTS CONSIDERED TO BE RELEVANT															
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.6)												
X	US 5085395 A (W.K. FRATER ET AL), 4 February 1992 (04.02.92)	1	E05B 73/00 G06F 1/00												
Y	---	1-10													
Y	US 5314162 A (D.W. KELLEY), 24 May 1994 (24.05.94)	1, 3-4													
Y	---														
Y	GB 2286630 A (MST DEVELOPMENT COMPANY LIMITED), 23 August 1995 (23.08.95)	6-7, 9													
Y	---														
Y	US 5487523 A (W.D. INGRAM ET AL), 30 January 1996 (30.01.96)	6-7, 9													
Y	---														
Y	WO 9413913 A1 (LUNDAGÅRDS, U.), 23 June 1994 (23.06.94)	1, 3-4, 8	E05B G06F												
Y	---														
Y	WO 9011425 A1 (LAMA SYSTEMS, INC.), 4 October 1990 (04.10.90)	1													
A	---														
A	GB 2297582 A (DALEN (BIRMINGHAM) LIMITED), 7 August 1996 (07.08.96)														
	---														
<p>The present search report has been drawn up for all claims</p> <table border="1"> <tr> <td>Place of search STOCKHOLM</td> <td>Date of completion of the search 20 January 1998</td> <td>Examiner WENDENIUS CHRISTER</td> </tr> <tr> <td colspan="3">CATEGORY OF CITED DOCUMENTS</td> </tr> <tr> <td colspan="3">           X : particularly relevant if taken alone            Y : particularly relevant if combined with another document of the same category            A : technological background            O : non-written disclosure            P : intermediate document         </td> </tr> <tr> <td colspan="3">           T : theory or principle underlying the invention            E : earlier patent document, but published on, or after the filing date            D : document cited in the application            L : document cited for other reasons            .....            &amp; : member of the same patent family, corresponding document         </td> </tr> </table>				Place of search STOCKHOLM	Date of completion of the search 20 January 1998	Examiner WENDENIUS CHRISTER	CATEGORY OF CITED DOCUMENTS			X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ..... & : member of the same patent family, corresponding document		
Place of search STOCKHOLM	Date of completion of the search 20 January 1998	Examiner WENDENIUS CHRISTER													
CATEGORY OF CITED DOCUMENTS															
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document															
T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ..... & : member of the same patent family, corresponding document															



DOCUMENTS CONSIDERED TO BE RELEVANT												
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.6)									
A	US 5116015 A (M.M. GASSAWAY), 26 May 1992 (26.05.92) --											
A	US 5052651 A (R. GUDDEE), 1 October 1991 (01.10.91) -----											
			TECHNICAL FIELDS SEARCHED (Int. Cl.6)									
<p>The present search report has been drawn up for all claims</p> <table border="1"> <tr> <td>Place of search STOCKHOLM</td> <td>Date of completion of the search 20 January 1998</td> <td>Examiner WENDENIUS CHRISTER</td> </tr> <tr> <td colspan="3"> <b>CATEGORY OF CITED DOCUMENTS</b>            X : particularly relevant if taken alone            Y : particularly relevant if combined with another document of the same category            A : technological background            O : non-written disclosure            P : intermediate document         </td> </tr> <tr> <td colspan="3">           T : theory or principle underlying the invention            E : earlier patent document, but published on, or after the filing date            D : document cited in the application            L : document cited for other reasons            &amp; : member of the same patent family, corresponding document         </td> </tr> </table>				Place of search STOCKHOLM	Date of completion of the search 20 January 1998	Examiner WENDENIUS CHRISTER	<b>CATEGORY OF CITED DOCUMENTS</b> X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document		
Place of search STOCKHOLM	Date of completion of the search 20 January 1998	Examiner WENDENIUS CHRISTER										
<b>CATEGORY OF CITED DOCUMENTS</b> X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document												
T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document												